

April 13, 2015

Analytical Procedures for West Lake soil samples

TestAmerica Laboratories, Inc. (TAL) proposes the following procedures to prepare and analyze soil samples from the West Lake Landfill in Bridgeton, MO. The purpose of the analysis is to demonstrate that there is no loss of radionuclides in heated soil and leachate samples.

1.0 Soil Samples

- 1.1 The samples will be homogenized per our standard oven drying and disaggregation procedure. The samples will be dried at approximately 105°C and then ground for 8 hours in paint cans with rolling rocks. Large rocks, twigs, and artificial materials will be removed prior to drying. Samples should be collected in the field in an 8oz. jar or 16 oz. jar.
- 1.2 Sample aliquots will be prepared both un-muffled and muffled at 600°C.
- 1.3 Samples will be analyzed by Alpha Spectrometry for Isotopic Uranium, Isotopic Thorium, and Radium-226.

2.0 Leachate Samples

- 2.1 A heated leachate (near boiling temperature) will be added to a sample aliquot which will be rotated on the TCLP tumbler for 1 hour.
- 2.2 The leachate sample will be prepared and analyzed by Alpha Spectrometry per standard procedures for Isotopic Uranium, Isotopic Thorium, and Radium-226.

Standard Operating Procedures

- ST-RC-0003: Drying and Grinding of Soil and Solid Samples
- ST-RC-0004: Preparation of Soil, sludge, Filter, Biota, and Oil/Grease Samples for Radiochemical Analysis
- ST-RC-0039: Radium-226 by Alpha Spectrometry
- ST-RC-0242: Isotopic Thorium, Plutonium, and Uranium in Various Matrices by Eichrom Separation Resins
- ST-OP-0009: Toxicity Characteristic Leaching Procedure (TCLP)

Instrument calibration SOPs are also available upon request.

Unit Price Table

Parameter	Un-muffled Soil Samples	Muffled Soil Samples	Heated Leachate Samples
Isotopic Uranium	\$80.00	\$85.00	\$90.00
Isotopic Thorium	\$80.00	\$85.00	\$90.00
Radium-226	\$100.00	\$105.00	\$110.00

Unit prices are based on a 15 business day turn-around time from sample receipt.